

A B S T R A C T

The present invention provides an *in vitro* method of determining the protection efficacy of a substance
5 against a cutaneous photobiological phenomenon caused by exposure to solar radiation. The photobiological phenomenon has an action spectrum $S(\lambda)$. The method comprises determining a dynamic absorption spectrum $DO(\lambda, t)$ representing the variation in the absorption
10 spectrum of the substance as a function of duration of exposure to a source of radiation emitting in the ultraviolet, and calculating the protection efficacy of the substance against the photobiological phenomenon on the basis of the dynamic absorption spectrum.

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